REMARKS

The claims are 7-17 and 21-26, with claim 7 being in independent form. Claim 7 has been amended. Support for the amendment can be found throughout the specification and claims as originally filed. Specifically, the amendment to claim 7 can be found, *inter alia*, on page 6, lines 27-37. Therefore, no new matter is added by way of this amendment. Applicants respectfully request entry of the above amendments and favorable reconsideration of the subject application in view of the following remarks.

Claims 7-12 and 14 stand rejected under 35 U.S.C. § 102(b) for allegedly being anticipated by Breivik *et al.* (WO 00/01249). Applicants respectfully traverse this rejection.

The present invention relates to a novel method of farm-raising fish of marine species including fry, that are still in the growing stage, which comprises feeding the fish a feed that comprises 25-70% by weight of proteins, 5-60% by weight of lipids, 0-40% by weight of carbohydrates, and 0-15% by weight of one or more additional components, wherein the lipids comprise at least one oil selected from the group consisting of marine oils and vegetable oils, wherein said at-least-one oil has been treated with at least one nitrogen-containing compound selected from the group consisting of urea and compounds of the general formula (I): N(R1) (R2) (R3) as described in the claims, wherein the amount of the at-least-one nitrogen-containing compound is sufficient to reduce the oil's susceptibility to being degraded through oxidation, and the amount of the at-least-one oil in the feed is sufficient to enhance the feed's ability to either improve the survival rate of the fish or improve the growth rate of the fish.

Breivik relates to feed for salmonids in order to obtain red-colored fish meat, which is dependent on the addition of pigment to the feed. Pigment, in most cases astaxanthin, is

unstable. The object of Breivik was to protect the pigment in order to maintain as much of it as possible because the pigment is the most expensive ingredient in feed for salmonids.

In contrast to *Breivik*, the present application relates to feed for marine species, which are hatched and developed in saltwater. The salmonids of Breivik, however, spawn in freshwater and thus, are not included in the term "marine species." Furthermore, marine species mainly comprise fish having white fish meat; therefore, pigment is not added to the feed for marine species. Although the pre-treated oils of the present invention are the same as those disclosed in Breivik, the present application claims the *method* of farm-raising marine species comprising feeding the fish a feed comprising pre-treated oils, and not the feed itself. In sum, Breivik fails to disclose the claimed methods. Therefore, Applicants respectfully request withdrawal of the §102 rejection.

Claims 13, 15-17 and 21-26 stand rejected under 35 U.S.C. § 103(a) for allegedly being obvious in view of Breivik *et al.* (WO 00/01249), with evidence provided by Food Day, Global Gourmet (March 7, 1997). Applicants respectfully traverse this rejection.

Food Day does not remedy the deficiencies of Breivik. As noted by the Examiner, Food Day teaches that cod and halibut are white-fleshed fish, and therefore it would not be desirable to include carotenoids in their diet. Office Action, p. 4. However, the Examiner has further concluded that the omission of carotenoids from the food taught by Breivik would not require undue experimentation on the part of one of ordinary skill in the art, who would have a reasonable expectation that the food without the carotenoids would continue to serve as an acceptable diet for all of cod, halibut and fry. *Id.* Applicants respectfully disagree.

As noted above, the present invention relates to a novel method of farm-raising fish of marine species. The problem in breeding of marine species, particularly fry and

young/small fish, is survival, as opposed to the unstable pigments of Breivik. These marine species are sensitive to oxidative stress from being fed highly oxidized feed. As explained in Example 1 of the present application, the level of free radicals is a measure of *ongoing oxidation*. Example 1 shows that commercial pellets (*i.e.* pellets with untreated oil) have higher levels of free radicals after heating in an extruder than pellets with oil treated as disclosed in the present application. In addition, the oxygen consumption in pellets was lower when an oil according to the present invention was used compared to feed produced with untreated oil. Specification, p. 5, ll. 19-21. Because the pellets with treated oil were less reacted with oxygen (*i.e.* less oxidized) than pellets with untreated oil, the pellets with treated oil had a larger potential to become oxidized than pellets with untreated oil. Thus the results, which indicate that the present invention protects the feed, were very unexpected.

The present invention utilizes the stabilization of ongoing oxidation after preparation of the feed. It should be noted that the compounds defined by the formula (I) are not used as antioxidants. The compounds of formula (I) are used to *remove* oxidation products, which is demonstrated by measuring anisidine value. Antioxidants, on the other hand, reduce *further* oxidation but are not able to reverse the oxidation that has already occurred. Thus, antioxidants will contribute to reduce further oxidation of the oil, but they are not able to recover the previous quality of the oil.

In the present invention, one or more antioxidants may be merely given as optional additives, but they are not an essential feature (see claim 14). Therefore, it is not the antioxidant(s) that is the effective principle of the present invention. Instead, the oil is treated with compounds of formula (I) to *remove* oxidation products. Then, one or more antioxidants are *optionally* added. Thereafter, the oil is used for manufacture of a feed having unexpected

qualities. The advantages and surprising results of the present invention is that, by using a treated oil when preparing the feed, the ongoing oxidation in the finished feed is reduced. In this way the present invention provides a solution to the problem of farm-raising marine species fish. The combination of Breivik and Food Day, however, do not disclose the claimed invention. Therefore, Applicants respectfully request withdrawal of the §103 rejection.

CONCLUSION

In view of the amendments and the above remarks, Applicants submit that all of the Examiner's concerns are now overcome and that the presently claimed invention is neither disclosed nor suggested by the art of record. Thus, Applicants submit that all of the claims are now in allowable condition and respectfully request that the amendments be entered. Accordingly, reconsideration and allowance of all claims in this application is earnestly solicited.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

Raymond R. Mandra
Attorney for Applicants
Registration No. 34,382

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, NY 10112-3801
Facsimile: (212) 218-2200